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1.0 INTRODUCTION

Owyhee Irrigation District (OID) proposes to replace the existing 69 kilovolt (kV) Tunnel to Dunaway transmission line. This line originates at OID's Owyhee Dam Tunnel Substation and extends for approximately 20 miles to the Dunaway Substation located 4 miles south of Nyssa, Oregon. Originally constructed in 1928, the existing transmission line has exceeded its design life expectancy and needs to be replaced and upgraded to serve additional load, improve reliability, and reduce maintenance.

OID conducted a feasibility evaluation of options and alternatives for this project. This evaluation indicated that environmental impacts associated with construction, visual impacts, construction costs, and subsequent maintenance costs could be significantly reduced through selection of an approximately 1.85-mile alternative alignment to the existing grant of right of way starting at the Tunnel Substation (Figure 1). The new alignment of this segment of the right of way was selected in consultation with BLM to ensure consistency with applicable land use plans, resource management plans, and related recreational uses of the Owyhee Canyon area. The proposed alignment would also be consistent with BLM's existing MFP and applicable VRM classifications

OID has prepared this environmental assessment (EA) to address construction of the 1.85-mile segment of transmission line within the new right-of-way alignment. In contrast, the rebuilding of the remaining 18+ mile transmission line segment within OID's existing right-of-way alignment does not need to be addressed in an EA based on determinations by the Bureau of Land Management (BLM) and Bureau of Reclamation (BOR). BLM has prepared a Categorical Exclusion (CE) determination for the rebuild of OID's transmission line within this 18+mile segment of existing grant of right of way.

1.1 Need for the Proposed Action

OID's existing 70-year old Tunnel to Dunaway transmission line has outlived its design life expectancy. Pole and insulator life is expected to dwindle significantly over the next few years. In addition, the line currently serves loads greater than its original design capacity. As a result, OID needs to rebuild and upgrade the existing single circuit line to improve reliability, provide capacity to serve current and projected loads, reduce high maintenance costs, and reduce environmental and visual impacts.

1.2 Conformance with Land Use Plans

Approximately 18 miles of OID's proposed rebuild will occur in its existing Tunnel to Dunaway grant of right of way. Only the remaining, southernmost 1.85-mile segment of the transmission line will be constructed in a new right of way alignment

selected by OID in consultation with the BLM. The entire project is located on public lands administered by BLM and BOR (Figure 2), and is in conformance with the applicable federal, state and local land use plans, including BLM's current Northern Resource Area Management Framework Plan (MFP). The proposed action is also in conformance with other applicable statutes, regulation, and plans. No other state or local authorizations or permits are required for the 1.85-mile rebuild.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

The proposed action addressed in this EA is the construction of a new 69kV transmission line within 1.85 miles of new right of way on Federal lands. The proposed action would involve removal of 20 old structures in the original right of way, and replacing them with 12 structures in a new 60-foot grant of right of way. The new right-of-way addressed in this EA starts at the Tunnel Substation, and extends to structure 12 where it ties into the existing grant of right of way. The survey description of the new right of way alignment is shown as follows:

This power transmission line is located in Sections 16, 20, and 21, Township 22 South, Range 45 East, WM Malheur County, Oregon; and the centerline is more particularly described as follows:

Commencing at the Northeast corner of said Section 16;
Thence S 40/ 44' 40" W, a distance of 10,471.5 feet to an existing power transmission pole, structure No. 1, the TRUE POINT OF BEGINNING for the centerline of this power transmission line;
Thence N 46/ 44' 40" W, a distance of 541.5 feet, at this point there is a ten-foot wide guy anchor easement bearing 57/ 21' 42" W extending for a distance of 107 feet;
Thence N 57/ 21' 42" E, a distance of 1091.7 feet, at this point there is a ten-foot wide guy anchor easement bearing S 34/ 25' 18" E extending for a distance of 49 feet;
Thence N 53/ 47' 42" E, a distance of 2203.7 feet, at this point there is a ten-foot wide guy anchor easement bearing N 34/ 34' 03" W extending for a distance of 60 feet;
Thence N 57/ 04' 12" E, a distance of 2331.0 feet, at this point there is a ten-foot wide guy anchor easement bearing S 48/ 08' 48" W extending for a distance of 59 feet;
Thence N 26/ 38' 12" E, a distance of 3817.5 feet more or less to a point on the centerline of the existing power transmission line, at this point there is a ten foot wide guy anchor easement bearing N 55/ 46' 24" W extending for a distance of 64 feet; the POINT OF TERMINUS at structure No. 12.

Basis of bearings:

Northeast corner of said Section 16 to Northeast corner of Section 10 said Township – N 42/ 20' 06" E, 7417.8 feet.

OID's proposed project schedule for the entire Tunnel to Dunaway project includes takedown of the existing line and construction of the rebuilt line between November 1, 1998 and March 1, 1999. The total construction period for the 1.85-mile segment of new transmission line is estimated to require no more than three weeks, beginning November 1, 1998.

Access to new structure locations would utilize existing roads and rights of way to the greatest extent feasible. Disturbance of the project area would be kept to a minimum. OID's proposed plans would require clearing of new temporary access roads to structures Nos. 3, 5, 7, 10, and 11 only. Structure locations 1, 2, 6, 8, 9, and 12 could be accessed via existing roads or rights of way, while structure No.4 would require helicopter access.

The principal vegetation cover in the project area consists of sagebrush, rangeland, and native grasslands (Figure 3). Although the total amount of vegetation clearing would be kept to a minimum, OID would re-vegetate any areas or habitats adversely impacted by construction activities, or as directed by BLM. The BLM has provided the following reclamation seed mix table. This seed mix will be broadcast, then raked or harrowed after broadcasting.

Seed Mixture for Areas Disturbed-Pure Live Seed	
Secar or Goldar bluebunch wheatgrass (*Agropyron spicatum*)	8#/acre
Indian ricegrass (*Oryzopis hymenoides*)	2#/acre
Bottlebrush squirreltail (*Sitanion hystrix*) – if available	1#/acre
Lewis flax (Linnum perenne)	0.5#/acre

In summary, the proposed action consists of the construction of 1.85 miles of 69-kV transmission line in a new right of way selected to reduce visual impacts from current levels due to fewer structures and improved routing, and to provide reduced environmental impacts due to improved access and ease of construction. OID's development of the transmission line utilizing the new right of way segment will also result in cost savings estimated to be $200,000-$250,000 lower than utilizing the existing right of way in its entirety.

2.2 Alternatives to the Proposed Action

The alternatives considered to OID's proposed action include the no-action alternative, and construction of an upgraded transmission line located entirely within the existing right of way.

2.2.1 No Action Alternative

The no-action alternative would consist of not rebuilding the transmission line. Under this option, OID would not address projected load demands or reliability concerns. No construction of a new line would take place, and no immediate environmental impacts would result. However, future maintenance activities on the existing line would also result in environmental impacts such as construction of a number of new access roads, in fact more than proposed for construction of the new line utilizing the new alignment.

The no-action alternative is not acceptable to OID or its clients since load demands are exceeding current capacity, reliability would be compromised, and maintenance costs and impacts would become increasingly severe due to the age of the existing structures and conductors. As such, the no-build alternative would not allow OID to provide the required service needs or meet reliability requirements.

2.2.2 Construction of A New Line in the Existing Right of Way

Under this alternative, a new, upgraded transmission line would be constructed entirely within OID's existing right of way. This option would result in significant environmental and aesthetic impacts, as well as in significantly higher costs. As a result, this alternative was dismissed from further consideration.

2.3 Proposed Construction Activities

Following right of way acquisition, impacts to the environmental and cultural resources of the new right of way segment may occur during surveying, right of way clearing, construction of the line, and subsequent maintenance activities. In brief, the general activities for construction of this line would include the following tasks:

1. Survey the Centerline. --A conventional survey crew would clear brush and small trees, as necessary, to provide a line of sight.

2. Clearing of right-of-way. --Vegetation clearing throughout the entire right-of-way would not be required due to the generally low growth of the local sagebrush community and to preserve habitat. However, localized clearing would occur within approximately 50-foot diameter areas at each of the structures to provide a work area, and within small ancillary areas at 5 of the structures for guy wire anchors outside the 60-foot right of way. Additional areas could be scraped or

cleared to allow access to these structure locations. Brush would be disposed of as directed by the authorized BLM officer.

3. Stake Pole Locations. --A conventional survey crew would be used for this task. Each structure would be staked on the ground and the stakes marked according to the construction drawings.

4. Pole Delivery. --Where suitable vehicle access exists, pole-hauling trucks would be used to deliver the poles to the cleared pads. In less accessible locations, unpaved access roads would be constructed (i.e., graded). Surveys of the proposed right of way indicate that new access roads ranging from approximately 30 feet to 700 feet would be required to reach structure locations 3, 5, 7, 10, and 11. The remaining structure locations could be accessed via existing roads or rights of way and, for structure 4, by helicopter.

   Following delivery of the poles the necessary hardware such as insulators and temporary sheave pulleys for stringing the conductors would be attached.

5. Excavate Pole Holes. --Pole holes would be dug using an auger or backhoe at locations accessible by mechanized equipment. Some hand digging of pole holes could be necessary at inaccessible locations, e.g., at structure No. 4. In areas of solid rock small explosive charges may have to be used prior to hand digging. Excavated material would be side cast for reuse as backfill for setting of the poles. Excess material would be spread out over the pad.

6. Setting of Poles. --A small crane would be used to set the poles. Once the pole is in place, hand labor would be used to backfill the excavated material and to tamp it around the pole. Pole heights would vary between 45 and 95 feet above ground to comply with applicable electrical clearance requirements of the National Electrical Safety Code (NESC) and the State of Oregon's Electrical Construction Code. The proposed pole heights and locations are shown in the project's plan and profile drawings in Attachment A.

7. Installation of anchors and guys. --Anchors and guys would be installed where required to stabilize structures using either a backhoe or hand labor. Guys and anchors would be placed either within the 50-foot diameter areas of disturbance or, for 5 of the structures (structures Nos. 1,4,6,8, and 12), nearby. Anchor locations located outside the 60-foot grant of right of way are provided in the survey description shown in Table 1.

8. Stringing of Line. --The conductors and overhead static wire would be pulled into place using a rope called a "sock line". The sock line is first run through rollers or

sheaves attached to each insulator on each pole. This is normally accomplished using a crawler tractor although the sock line may be walked from pole to pole in short sections. Given the local topography, a helicopter would be required to connect structure number 4 with the rest of the line.

Equipment that pulls and places tension on the powerline is typically set every two to five miles, depending on terrain and the number of angles. As such, this equipment would be employed at the Tunnel Substation and beyond the end of this line segment. The conductors and shield wire would then be mechanically pulled through the sheaves until the desired tension is reached. Workers would complete the job by attaching the wire to the insulators either by climbing the poles or by using an elevator truck.

9. Construction Clean-up. --Following erection of the new transmission line all construction debris, as well as the old de-energized equipment between structures 1 and 12 in the existing right of way, would be removed for offsite disposal at an approved disposal site.

10. Restoration. --All disturbed areas resulting from line construction and cleanup would be rehabilitated as directed by permit stipulations and by the BLM authorized officer.

2.4 Specific Construction Methods

2.4.1 Overview

The proposed new 1.85 mile right of way alignment would extend from structure number 1 at the Tunnel Substation to structure 12, located at the junction of the new segment with the existing right of way. A total of 12 new structures would be installed within this segment. Three of these poles would be single pole wood structures, one would be a three pole steel structure, six would be double pole "H-frame" wood structures, and two would be three pole wood structures. Of these twelve structures, six would need to be guyed. The specific construction method for each of these structures is described in the following paragraphs:

Structures 1, 2, and 3 would be single pole wood structures. Pole holes would be excavated by an auger attached to a backhoe. Each pole would be assembled on the ground at the pole location to eliminate the need for clearing a construction yard at the site. The pole would be lifted into place by a crane, and backfill from the auger excavation would be placed around the pole by hand. The height of these poles would vary from 85 to 85 feet consistent with NESC standards, and each would be buried to a depth of 10% plus two feet of its total length. No new access roads would be required for poles 1 and 2, but Pole 3 would require an approximately 30-foot access road. Poles 1 and 3 would be guyed for extra stability.

Structure 4 would be a three-pole steel structure. The pole holes would be hand dug by ground crews due to the lack of vehicle access to the site. The inaccessibility of this location would also require that the poles and all other equipment be delivered to the site by helicopter. The helicopter would then aid in erecting the poles. Set poles, 85 to 90 feet in height, would be backfilled and tamped by hand. Structure 4 would also be guyed. No new access roads would be cut for Structure 4.

Structures 5, 6, 7, 8, 10, and 11 would be double wood pole "H-frame" structures. Pole holes would be excavated by an auger attached to a backhoe. Each structure would be assembled on the ground on existing cleared areas such as structure pads or access roads to eliminate the need for clearing a construction yard at the site. The structures would be lifted into place by a crane, and backfill from the auger excavation would be placed around the structures by hand. The heights of these 6 structures would range from 45 to 90 feet to meet NESC standards, and each would be buried to a depth of 10% plus two feet of its total length. No new access roads would be required for structures 6 and 8. Structures 5, 7, 10, and 11 would require access roads ranging from 150 to 700 feet. Their final lengths and alignments would be determined in the field. Structures 6 and 8 would also be guyed for extra stability.

Structures 9 and 12 would be three-pole wood "angle structures." Pole holes would be excavated by an auger attached to a backhoe. Each structure would be assembled on the ground on existing roads to eliminate the need for clearing a construction yard at the site. The structures would be lifted into place by a crane, and backfill from the auger excavation would be placed around the structures by hand. The heights of the structures would vary from 45 to 55 feet consistent with NESC standards, and each would be buried to a depth of 10% plus two feet of its total length. No new access roads would be required for structures 9 and 12. Structure 12 would also be guyed for extra stability.

2.4.2 Post-Construction Plan

2.4.2.1 Existing Structures

BLM staff has requested that some of the existing poles be left in place following construction and energizing of the new transmission line to serve as raptor hunting perches. No poles would be left in place from below the canyon rim downslope to the Tunnel substation. The remaining old structures in the project area will be evaluated to determine their suitability as raptor perches without presenting a conflict with the new line. Those structures which may conflict will be cut off at ground level, hauled off-site on a "low-boy" trailer and disposed of in accordance with applicable regulations. Approximately ten poles could be hauled at once, thereby reducing the total number of additional vehicle trips.

2.4.2.2 Road Rehabilitation and Winter Conditions

All new access roads that would be constructed by OID would have small berms on either side of the roadbed to discourage off-road-vehicles from leaving the roads. It should be noted that the latter represent unpaved access roads that would be developed by OID solely to allow construction of the new transmission line and, to a lesser extent, provide subsequent access for line maintenance. These roads would not be intended to serve as public roadways. All roads utilized during construction would be rehabilitated to their pre-construction conditions as directed by the BLM authorized officer. No maintenance of the existing road or access roads would be scheduled to occur during the winter months. Any emergency access required during the winter months would be handled on a case to case basis.

2.4.2.3 Use of Explosives

Small explosive charges may need to be used at some pole locations in areas of solid rock substrate to allow subsequent hand digging of the pole holes. OID and its contractors would notify the BLM and BOR before any use of explosives.

2.4.2.4 Duration of Work

The total duration of work within the 1.85-mile project area would be expected not to exceed three weeks, and would be scheduled for November 1998.

3.0 AFFECTED ENVIRONMENT

3.1 Overview of the Project Area

OID's Tunnel to Dunaway transmission line rebuild project would be located in Malheur County, Oregon. Although OID's rebuild would include the entire 20 mile transmission line, only the first 1.85 miles of new right of way are subject for this EA. The rebuild of the transmission line in the remaining 18+ miles of existing right of way was addressed in BLM's CE.

The project area for the new right of way segment would begin at OID's Tunnel Substation near the Owyhee Dam on the Owyhee River, and end at the junction with the existing right of way approximately 1.85 miles to the northeast (Figure 1). The project area lies in the NE¼ of Section 20, the NE¼NW¼ of Section 21, and in the SW¼, and the E½ of Section 16, T22S, R45E, Owyhee Dam Quadrangle (USGS 1967). The environmental and cultural resources of the proposed right of way and adjoining areas are described in the following paragraphs.

3.2 Air Resources

Under criteria established through the Clean Air Act, as amended in 1990, the project area has been designated as Class II, which means that air quality is good to excellent. The air pollutant

of most concern on BLM administered land is particulate matter, which may originate from fire, roads or windblown dust, and vehicle use. Most of this particulate matter is less than 10 microns in diameter (called PM10).

3.3 Areas of Critical Environmental Concern (ACEC)

ACEC's are parcels of public land that require special management attention to protect special features or values. ACEC's may be established to protect important historic, cultural, or scenic values; fish, wildlife, or other natural resources; or human life and safety. Designation as an ACEC may limit the types of land use that can occur within the area.

No portion of OID's project area lies within or adjacent to an existing ACEC. However, BLM has identified a potential ACEC, referred to as the Owyhee Below the Dam ACEC, in the vicinity of OID's project. This potential 11,239 acre ACEC includes the viewshed of BLM-administered land from near the dam to downstream approximately 13 road miles to near the siphon site. According the BLM's description, the "relevant and important values of this potential ACEC include high scenic values of diverse landscape elements in a substantially natural setting, a special status plant species (Mulford's milkvetch), the rare presence of a cottonwood gallery in a riverine system, and the combined wildlife value of diverse habitat types supporting a large number of wildlife species and an important migratory corridor for neotropical birds". BLM is currently evaluating five different management alternatives for this tract of land, including non-ACEC designation options.

Although not a designated ACEC, the Owyhee Dam and associated Reclamation Village is listed by the National Heritage Program and administered by BOR. These features, however, lie outside OID's proposed project impact area.

3.4 Cultural Resources

A cultural resource is generally defined by Federal agencies as any location of human activity that occurred at least 50 years ago, and is identifiable through field survey, historical documentation, or oral evidence. American Indian traditional use areas are a special category of cultural resources. Some cultural resources may be less than 50 years old but have cultural or religious importance to American Indian tribes or paramount historic interest to the public.

A Cultural Resource Survey was conducted for the project area in September 1998. A Class I Inventory was conducted as was a Class III Field Survey. The Class I Inventory included record searches at Federal Offices including the Vale District BLM and Snake River Area and Pacific Regional Offices of the BOR. The Class III Field Survey included a licensed archaeologist conducting a physical survey of the project area in the field. The results of these surveys, entitled "A Cultural Resource Survey of the Proposed OID 69kV Transmission Line Rebuild", and dated September 24, 1998, was submitted to BLM on September 24, 1998

under separate cover. In brief, the survey discovered 5 isolated finds including four artifacts and one rock shelter. Four of the isolated finds were not determined to be eligible for registry with the National Register of Historic Places (NRHP) as cultural properties by themselves. Isolated Find No. 5, a rock shelter, is located approximately 0.5 mile from the proposed right of way. This feature needs to be recorded and evaluated further in order to make a NRHP recommendation.

3.5 Farm Lands-Prime or Unique

No known Prime or Unique FarmLands are located within the new right of way segment.

3.6 Floodplains

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map Panel 410149-0950-B, the project area lies in Zone D, defined as "Areas of undetermined, but possible flood hazards." The Federal Emergency Management Agency has not yet published this map.

3.7 Topography and Soils

The topography in Sections 20 and 21 ranges from moderately steep to very steep, primarily due to the presence of the Owyhee Canyon. The associated soils are loamy, very stony or shallow. Soil generally consists of bare hard bedrock of unweathered volcanic, metamorphic, and sedimentary rock to shallow, very stony loam over basalt bedrock formed in mixed colluvium and alluvium weathered from basalt.

The topography in Section 16 is gently sloping to sloping. Soil characteristics range from generally clayey, very stony, or shallow formed in loess and colluvium from basalt and tuff to very shallow, rocky loam formed in mixed alluvium, loess and residuum weathered from basalt.

3.8 Wild and Scenic Rivers

Congress established the National Wild and Scenic River System (NWSRS) in 1968 to preserve and protect selected free-flowing rivers. The law, known as the Wild and Scenic Rivers Act (WSRA) defines a river as "a flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, creeks, runs, kills, rills, and small lakes." The Act also defines free flowing as "existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway.

No part of the project area lies along or crosses a congressionally designated Wild and Scenic River. However, based on BLM's evaluations of the Owyhee River corridor, those segments of the river within the potential Owyhee Below the Dam ACEC, with adjacent BLM-administered land, have been determined eligible and suitable for possible inclusion in NWSRS.

3.9 Wetlands/Riparian Zones

Wetlands include lakes, reservoirs, playas, sloughs, meadows, springs, and seeps that are permanently or seasonally covered with water. They are also commonly found as features independent of a defined stream channel and can occur throughout various elevations and landscape settings. This is particularly true for meadows, springs, and seeps that may be present within very arid areas and at low elevations. Wetlands typically possess three characteristics including hydrophytic vegetation, hydric soils, and wetland hydrology.

Riparian areas typically represent transition zones between wetlands and other surface waters, and uplands. Riparian zones frequently border streams, rivers, lakes, and wetlands.

The principal wetlands in the project area include the Owyhee River and Lake Owyhee. However, a number of jurisdictional wetlands have also become established as a result of long-term leakage from the canyon tunnel. These wetlands lie below the elevation of the Tunnel Substation, and are thus not within the proposed area of disturbance. No riparian zones exist within the proposed area of disturbance.

3.10 Wilderness Areas

In November 1980, as part of its review of public lands for possible wilderness designation, the BLM in Oregon designated 87 Wilderness Study Areas (WSA) consistent with the Federal Land Policy and Management Act. A WSA is a parcel of public land determined through intensive inventories to possess certain characteristics described in the Wilderness Act.

No part of the project area lies on or near a designated Wilderness Study Area, and no such areas would be impacted by the project.

3.11 Native American Religious Concerns

Native American Religious Concerns are generally described as American Indian traditional use areas and are a special category of cultural resources. Some of these specially designated cultural resources may be less than 50 years old but have cultural or religious importance to American Indian tribes or paramount historic interest to the public.

No known Native American religious concerns exist in the project site.

3.12 Threatened and Endangered Species

A number of species listed by the FWS and/or State of Oregon occur in the vicinity of the project. Species such as peregrine falcon occur seasonally during the fall and winter along Lake Owyhee. Bald eagles may occur during the winter along Lake Owyhee, but no winter roost or nest sites are located within the project area. In contrast, a pair of golden eagles nests in the vicinity of the north central portion of the existing right of way several miles from the proposed segment. Figure 4 shows potential raptor nesting habitat in the vicinity of the project.

Northern kit fox, a state listed species, is reportedly absent from the Malheur Resource Area. Spotted frog, considered for listing by the FWS, occurs in scattered riparian areas within the Malheur Resource Area.

Consultation with BLM also identified three sensitive species as occurring in the vicinity of the project area. Burrowing owls occur in the vicinity of the central portion of the existing right of way, but have not been reported near the new segment. Burrowing owls migrate out of the project area in the winter months. Similarly, long billed curlews occur seasonally in the vicinity of the project area, but are not expected to occur during the construction period. The Mojave collared lizard has been reported within several miles of the project area, but their status in the proposed right of way is unknown.

One species of plant that is of special concern and a BLM special status plant species has reportedly been reported several miles from the project site. Mulford's milkvetch (Astragalus mulfordiae) may be listed as threatened or endangered within the foreseeable future. However, the only documented population of Mulford's milkvetch in the vicinity of the project occurs approximately six miles from the new right of way. The locations of these populations were verified in the field by BLM and POWER staff. POWER also conducted a separate vegetation survey for Mulford's milkvetch, which is submitted under separate cover. Sterile milkvetch (A. sterilis) and solitary milkvetch (A. solitaris), both special status plant species, may also be present in the project area.

3.13 Hazardous or Solid Waste

There are no currently known hazardous materials or wastes, or solid wastes located within the proposed right of way.

3.14 Water Quality-Drinking/Ground

Federal agencies are responsible for water quality on Federal lands according to BLM's and BOR's Memoranda of Understanding (MOU) with Oregon Department of Environmental Quality (ODEQ). These MOU's require BLM and BOR to meet water quality standards,

monitor activities to assure that they meet standards, report results to ODEQ and meet periodically to re-certify best management practices for controlling non-point sources of pollution.

OID's proposed project does not cross or adjoin any surface waters. With regard to groundwater, groundwater data for the region is limited and based on small, isolated basin studies and well logs. Since the geology of the project region is volcanic, groundwater occurs primarily in faults, fractures, and joints of unconfined as well as perched aquifers. The quality in aquifer systems in the vicinity of the project is unknown. However, most of the region contains good water quality, although the water is usually hard and contains moderate amounts of dissolved minerals. (Ferns et.al. 1993). No wells, springs or seeps are located in or along OID's right of way.

3.15 Visual Resources

The proposed project is located near the Owyhee Lake and Owyhee Canyon recreation areas. Based on information provided by BLM's Vale staff, the VRM category between the Owyhee River and the canyon ridgeline is classified as VRM II. The corresponding VRM classification for areas inland of the ridgeline is Class IV. Class II designations require retention of the landscape's existing character, and authorized actions may not modify existing landscapes or attract the attention of casual viewer. Class IV designations allow activities that involve major modifications of the landscape's existing character.

4.0 ENVIRONMENTAL IMPACTS

4.1 Overview of Impacts

Anticipated and potential impacts that would be associated with construction of OID's Tunnel to Dunaway 69 kV transmission line within the 1.85 miles of new right of way are discussed in the following sections. For comparative purposes, the corresponding impacts associated with the no-build alternative are also discussed.

In brief, construction of OID's rebuild in the proposed right of way would allow OID to reduce visual impacts from existing levels, avoid potential conflict areas such as ACEC's and endangered species habitat, be consistent with BLM's Management Framework Plan, and result in the least amount of cumulative impacts to environmental and cultural resources. It would also represents the most cost-effective solution for OID to meet current and projected load demands.

4.2 Air Resources

Construction of this project would be expected to generate some dust and fugitive emissions due to vehicle traffic and equipment operation, clearing and grading, and augering of pole holes. However, such minor air quality impacts would be localized, occur for only short periods at each structure location, and would be expected to be low level due to the late fall - early winter construction period, i.e., the period of highest precipitation. For this as well as the following impact discussions it should be remembered that although the total construction period within the 1.85 mile right of way segment is estimated between 2-3 weeks, construction activities at each structure location would occur for only 2 to 3 days.

The no-build alternative would not require augering of new pole holes. However, under this option OID would also need to periodically replace old poles throughout the year. This activity would also result in periodic increases in fugitive dust and vehicle emissions.

4.3 Areas of Critical Environmental Concern

OID's transmission line would be consistent with BLM's current MFP, and would not cross or adjoin any existing BLM-designated ACECs. The nearest ACEC would be the potential 11,239-acre Owyhee River Below the Dam ACEC, located more than a mile north-northwest of the project.

OID's project would also be consistent with the National Heritage-listed, BOR-administered Owyhee Dam and associated Reclamation Village property to the southwest of the project. Prior to any construction in the immediate vicinity of this area OID would consult with BOR to provide information on unique or sensitive species and mitigation. This EA is the appropriate vehicle for determining presence or absence of resources and mitigation, not for future consultation.

Under the no-build alternative OID's existing transmission line would continue to operate in its current right of way. Its status with regard to ACECs and the current MFP would be similar to the proposed action.

4.4 Cultural Resources

Five isolated cultural resource finds were made during the September 1998 survey. None of the four isolated finds located in the vicinity of the proposed project area was judged to meet NRHP eligibility requirements. However, OID agrees that in the event additional artifacts (either surface or sub-surface) were discovered in association with these materials, or features uncovered during transmission line construction, OID would halt further activities at the site and contact BLM's archaeologist to evaluate the findings and make a NRHP eligibility determination. With regard to Isolated Find No. 5, a rock shelter, OID's proposed transmission line would lie more than 0.5 mile to the southeast of this feature. The proposed project would not impact the latter.

With regard to the no-action alternative, the status of cultural resource features in the existing right of way is unknown. However, OID's existing line and right of way is located significantly closer to the rock shelter than the proposed rebuild.

4.5 Farm Lands-Prime or Unique

No known prime or unique farmlands are located within or along OID's proposed new right of way segment, and no impacts would be expected. Similarly, no such lands occur along its existing line, and no impacts would occur under the no-build alternative.

4.6 Floodplains

OID's southern 1.85 mile right of way segment lies outside the 100-year flood zone, and construction of the transmission line or ancillary improvements such as access roads would not impact drainage or run-off patterns. The project would not require placement of fill material into the floodplain, and no impacts would be expected. According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map Panel 410149-0950-B, the project area lies in Zone D, defined as "Areas of undetermined, but possible flood hazards." The Federal Emergency Management Agency has not yet published this map.

The no-build alternative also lies outside the FEMA designated 100-year flood zone, and no impacts are expected.

4.7 Topography and Soils

Impacts to soils would include localized grading for access roads, and augering of pole holes. Access to the right of way would utilize existing roads and rights of way to the greatest extent feasible, but surveys indicate that up to 6 access roads ranging from an estimated 30 to 700 feet would be required. Although the final alignment of these access roads has not been surveyed, OID would employ all appropriate soil erosion and sediment control measures necessary to avoid soil erosion.

The no-build alternative would not require development of new access roads, but may require auguring to allow replacement of old poles at any time of the year.

4.8 Wild and Scenic Rivers

Neither the proposed action or the no-build alternative will impact any designated wild and scenic rivers, or the segment of the Owyhee River within the potential Owyhee Below the Dam ACEC. This segment has been determined by BLM to be eligible and suitable for possible inclusion in NWSRS. The proposed construction activities would meet management requirements for eligible recreation classified study rivers, as described in BLM Manual 8351: Wild and Scenic Rivers-Policy and Program Direction for Identification, Evaluation, and Management.

4.9 Wetlands and Riparian Zones

OID's proposed project would not cross, adjoin, or otherwise impact any jurisdictional wetlands or riparian zones. The proposed right of way lies well above the Owyhee River floodplain or associated canals, and away from areas supporting wetlands or associated riparian zones.

The no-build alternative also has no impacts on wetlands or riparian zones.

4.10 Wilderness Areas

No Wilderness Study Areas would be impacted either by the proposed project or the no-build alternative.

4.11 Native American Religious Concerns

Based on consultations with BLM and review of existing data bases, no known Native American religious concerns exist in either OID's proposed or existing rights of way, and no impacts would be expected on these resource features under either alternative.

4.12 Threatened and Endangered Species

OID's proposed project would not be expected to impact species listed as endangered or threatened, eligible for listing, or identified as sensitive by BLM and/or other agencies. The projected absence of impacts is primarily due to the projected timing of construction, and the distance of the project from known populations of such species. Consultations with BLM indicate, for example, that displacement of the nesting pair of golden eagles would not be expected since construction would occur during the non-nesting season several miles from the nest. Other species such as long-billed curlew and burrowing owl have been reported in the vicinity of the project area, but are migratory and would not be expected to occur during the projected construction period. The Mojave collared lizard has been reported within several miles of the project area, but no impacts would be expected since this species would be in hibernation.

With regard to Mulford's milkvetch, the closest reported population occurs approximately six miles from the proposed right of way. As such, construction of the access roads or the transmission line should have no effect on this species.

OID's existing right of way also avoids known listed and sensitive species' habitats. However, under the no action alternative, OID also anticipates construction such as new access roads, structure replacements, and other maintenance requirements based on the age of the existing line. The timing and extent of such maintenance activities, and the degree of associated environmental impacts, cannot be predicted.

4.13 Wastes - Hazardous or Solid

The clearing of right of way access roads, structure pads, and construction of the transmission line would generate vegetation debris. This vegetation debris would be removed offsite to an approved disposal site or left within the right of way consistent with BLM or BOR specifications. The proposed action would not produce hazardous wastes. Refueling of equipment would be

conducted using a mobile fuel truck. This truck would be kept at the pole storage area. No hazardous materials would be employed in or along the right of way.

Under the no-build alternative, no vegetation debris would be generated.

4.14 Water Quality-Drinking or Ground

Neither the proposed alternative or no-build alternative would impact the local surface or ground water resources or water quality. No wells are located within the proposed right of way, and the bottom of the pole excavations lie above the local ground water resources.

4.15 Visual Resources

The area between the Owyhee River and the canyon ridgeline is classified as VRM II. The corresponding VRM for areas inland of the canyon ridgeline is Class IV. Since OID currently operates an existing 69kV transmission line in the project vicinity, the principal change is the increased height of the proposed structures from the current range of 45 to 75 feet to the proposed range of 45 to 95 feet. This increase in the heights of some structures is compensated for through use of fewer structures (e.g,: 12 new structures in the proposed right of way compared to 20 structures in the corresponding segment of the existing right of way), and realignment of the right of way to take advantage of the local topography to reduce visibility. Since OID's proposed project represents a replacement of an existing feature, and does not represent an incremental addition of impacts, it is consistent with these designations. In fact, the new right of way segment has been selected to minimize visual intrusion, and has been routed to take advantage of the existing topography.

5.0 CUMULATIVE IMPACTS

The cumulative impacts of OID's proposed project include impacts associated with construction of 1.85 miles of new 69 kV transmission line in a new right of way as described in the previous section, construction of approximately 18 miles of new 69 kV transmission line in OID's existing Owyhee to Dunaway right of way between structure 12 and the Dunaway substation, and removal of OID's old transmission line. The cumulative impacts of these three project phases are described in this section.

With regard to air resources, construction of the new transmission line and removal of the old line will generate some dust and fugitive emissions due to vehicle traffic and equipment operation, clearing and grading, auguring of pole holes, and structure erection and removal as described in Section 4.2. These impacts will be short term, localized, and occur during the late fall and winter seasons, i.e., periods of highest precipitation which will suppress fugitive dust. As a result, the cumulative impacts of the projects on air resources will be insignificant.

With regard to ACECs, OID's existing grant of right of way does not cross or adjoin any existing ACECs, and the construction of the new transmission line as well as removal of the old existing line will not impact such areas. Development of the new right of way

alignment is consistent with BLM's Management Framework Plan, as is the development of the remaining 18+ miles of transmission line which represents a replacement of the existing line within the existing right of way.

Similarly, OID's proposed project is not expected to impact cultural resources. A September 1998 cultural resources survey of the new right of way alignment located five isolated finds. Four of these were determined not to be eligible for registry with NRHP. Isolated Find No. 5, a rock shelter, is located approximately 0.5 mile from the proposed right of way, and would not be impacted. The remaining transmission line segments between structure 12 and the Dunaway substation will be constructed entirely within OID's existing grant of right of way, and not affect previously undisturbed areas or cultural resources.

No known prime or unique farm lands are located within the new right of way segment, and development of the remaining transmission line segments will be restricted to OID's existing BLM grant and private easements. As such, no prime or unique farm lands, particularly those potentially located along both sides of the right of way north of Brown Butte, would be impacted by the project.

With regard to floodplains, OID's proposed transmission line crosses the Owyhee River at the same location as the existing crossing, but requires only two structures due to a longer (i.e., 1,100 feet) span length. This will allow spanning of the river and removal of two existing structures currently located within the floodplain. As a result, construction of the new transmission line will result in a net reduction of floodplain impacts, and OID's proposed project will not impact the water storage or conveyance characteristics of the Owyhee River or any other streambed or floodplain. All remaining streams and floodplains would be spanned.

Project impacts to topography and soils within the new right of way segment were discussed in Section 4.7. Since the remaining construction activities will be restricted to OID's existing right of way, no additional impacts to these resources are expected. Similarly, OID's project does not cross or adjoin congressionally designated wild or scenic rivers along its entire 20 mile length, and no impacts to this important resource are expected.

The new 1.85 mile right of way alignment northeast of the Tunnel Substation does not cross or adjoin any wetlands and riparian zones. All streams and associated wetlands along the remaining 18+ mile segment of the grant of right of way will be spanned to avoid impacts. In addition, OID has received authorization from the U.S. Army Corps of Engineers (Case No. 98-789) for removal of the existing transmission line and construction of the new line over wetlands and riparian zones along the Owyhee River under Nationwide Permit No. 3. OID also contacted the Oregon Division of State Lands, and

received a determination that its project would not impact state wetlands, or be subject to the state removal or fill permit program. As such, OID's project will have no cumulative impacts to wetlands or riparian zones.

No designated Wilderness Study Areas or Native American Religious Concerns will be impacted by the project based on field surveys, consultations with BLM, searches of data bases, and use of OID's existing grant of right of way and easements for 18+ miles of the 20 mile project No such areas or concerns occur in the new right of way alignment.

With regard to threatened and endangered species, no cumulative project impacts are expected to species such as golden eagles, long-billed curlews, burrowing owls, or Mojave collared lizards for reasons stated in Section 4.12. Similarly, no impacts to milkvetches (i.e., sterile, solitary, and Mulford's milkvetches) are expected to occur within the 1.85 miles of new right of way, or along the approximately 10 mile northern segment crossing agricultural lands north of Brown Butte.

However, detailed plant surveys conducted in September and October 1998 along the 9+mile segment on BLM lands indicate that the right of way crosses near one area, and crosses through a second area supporting Mulford's milkvetch populations. One population is located approximately 300 feet from proposed structures 45 and 46 in the northeastern section of T21S, R46E, Section 20. The other known population is located in the immediate vicinity of proposed structures 40, 41, and 42 in the northwest corner of T21S, R46E, Section 29. Based on soil characteristics and the occurrence of associated plant species, Mulford's milkvetch may also potentially occur in the vicinity of structures 39, 43, 44, 46, and 51. However, this species was not located in these areas of the right of way during the 1998 plant surveys.

The construction of the new 69 kV transmission line, and the removal of the old line, in these areas of special concern will be governed by BLM's special stipulations as detailed in Exhibit A to BLM's Right of Way Reservation OR-48354 Amendment. BLM developed these stipulations to avoid or minimize project impacts to this sensitive plant species, and OID's contractor operations will be bound by them. It should be noted that, within the BLM segment of the project, development of the new transmission line will result in a 44 percent reduction in number of power poles from 97 existing structures to 54 proposed structures, and a corresponding reduction in number of right of way access roads. These currently impacted areas would be reclaimed by native vegetation or reseeding as detailed in Section 2.1.

With regard to solid and hazardous wastes or water quality resources, the construction of the 20 mile Tunnel to Dunaway transmission line, or removal of the existing line, will not result in any adverse impacts to these resources. All construction activities in the vicinity of rivers, streams, or floodplains will be consistent with applicable soil erosion and

sediment control requirements. Such requirements include, but may not be limited to, installation of silt curtains, silt fences, or staked haybales as appropriate along the down-gradient sections of construction areas.

The cumulative project impacts to visual resources are similar to those described for the 1.85 mile segment of new right of way in Section 4.15. The VRM for the existing grant of right of way is Class IV, which allows activities that involve major modifications of the landscape's existing character. OID's proposed replacement of its existing Tunnel to Dunaway transmission line within the existing grant of right of way does not represent "a major modification of the landscape's existing character". In fact, the significant reduction in number of structures (54 new structures will replace 97 existing ones) will result in a reduction of visual impacts. It should also be noted that the right of way segments inland of the Owyhee River Canyon receive only a fraction of the recreational use of the canyon and Owyhee Reservoir areas, and that the northern 10 miles of right of way cross agricultural lands.

Based on these assessments, the cumulative impacts of the proposed action, in conjunction with past, present, and foreseeable future actions, are not expected to be significant. The construction impacts for the entire 20 miles of new 69 kV transmission line are generally similar to the impacts discussed for development of the 1.85 mile segment of new right of way. The notable exception is the potential for impacts to two populations of Mulford's milkvetch. Strict adherence to BLM's special stipulations and best management practices will help avoid or minimize project-related impacts to this important species.

6.0 CONSULTATION AND COORDINATION

6.1 Agencies, Individuals, and Organizations Consulted

The following persons, agencies and organizations were consulted:

Bureau of Land Management
100 Oregon Street
Vale, OR 97918

Persons Contacted: John Freeman, Realty Specialist; Robert Alward, Outdoor Recreation Planner; Al Bammann, Wildlife Biologist; Randy Eyre, NEPA Coordinator; Jean Findlay, Botanist; and Diane Pritchard, Archaeologist;
Consulted on: Wildlife habitat, T&E species, sensitive species, wetlands, cultural resources, visual resources, recreation, Wilderness Study Areas, Wild and Scenic Rivers, ACECs, access and rehabilitation.

Bureau of Reclamation
Snake River Office
214 Broadway
Boise, ID 83702

Person Contacted: James Badulfson
Consulted on: Natural Heritage Program

Bureau of Reclamation
Boise Office
1150 Curtis Rd. Ste. 100
Boise, ID 83706-1234

Person Contacted: Will Geer, Realty Specialist
Consulted on: Land Use

Richard Wenglikowski, PLS, Registered Land Surveyor
Consulted on: Survey Description

6.2 List of Preparers

Lynn Askew	Project Management, Environmental Impacts, Soils
John Wiese	Introduction, Proposed and Alternative Actions, Environmental Impacts
Brian Rozyla	Affected Environment, Construction Methods, Impacts

7.0 BIBLIOGRAPHY

USDI, USGS Owyhee Dam Quadrangle 1967

BLM Vale District Recreation Guide-Malheur Resource Area, 1995

A Cultural Resource Survey of the Proposed Owyhee Irrigation District 69kV Transmission Line Re-Build Walsworth, Claudia Taylor, September 24, 1998.

Botanical Survey of Proposed and Existing Right of Way for Owyhee Irrigation District's 69kV Line Re-Build Bowlin, T.R., September, 1998.

Register No. CE-OR-030-99-01

CATEGORICAL EXCLUSION REVIEW/DECISION RECORD

Project Name:	Owyhee Dam-Adrian 69 kV Electric Powerline R/W Amendment
Categorical Exclusion:	516 DM 6, Appendix 5.4., E., (13)
Prepared by:	Jon Freeman
Location:	T. 21-22 S., R. 45-46 E., various sections-legal description attached
Case File No.	OR-48354

Exception	Comment/Explanation	Initials	Date
1) Health & Safety			
2) Unique Resources			
3) Controversial			
4) Risks			
5) Precedent			
6) Cumulative			
7) Cultrl & Histcl			
8) T&E Species			
9) Violate Law			

PROPOSED ACTION:
The primary proposed action is to issue an amendment to Right-of-Way OR-48354 to authorize the replacement, maintenance and operation of a an existing 69 kV electric powerline along a route connecting Owyhee Dam and Adrian. All activity would occur within the existing powerline right-of-way. (A separate rerouting of some 1.8 miles of powerline on the south end would be addressed in an environmental assessment to be prepared by Power Engineers.) A small amount of soil would be disturbed in association with vehicle traffic and placement of new poles, as would any vegetation on these areas. The soil surface would be smoothed at the time of construction, and a specified mixture of grass seed would be planted.

MITIGATION:
Compliance with the stipulations of the original grant and the attached special stipulations would minimize adverse environmental impacts.

DETERMINATION/DECISION:
The proposal has been reviewed in accordance with the categorical exclusion review guidelines. This proposal would not involve any significant effects, and qualifies as a categorical exclusion in accordance with 516 DM 6, Appendix 5.4, E., (13). Therefore, the proposal is excluded from the EA/EIS requirements of NEPA by 40 CFR 1508.4. It is my decision to implement the proposed action as described above.

s/Roy Masinton
Malheur Resource Area Manager

10/29/99
Date

FINDING OF NO SIGNIFICANT IMPACT AND DECISION RECORD
FOR ENVIRONMENTAL ASSESSMENT OR-030-99-01
ADDRESSING AMENDMENT OF
RIGHT-OF-WAY RESERVATION OR-48354

Recommendation

It is recommended that Right-of-Way Reservation OR-48354 be amended to authorize the Bureau of Reclamation to reroute that portion of the Owyhee Dam-Adrian (Tunnel- Dunaway) 69kV electric transmission line addressed in Environmental Assessment OR-030-99-01 prepared by Power Engineers in November, 1998. This right-of-way reservation would be amended pursuant to Section 507 of the Federal Land Policy and Management Act of 1976 (90 Stat. 2781, 43 U.S.C. 1767). All activities associated with this Amendment to Right-of-Way Reservation OR-48354 would be subject to FLPMA, applicable regulations contained in 43 CFR 2800, the terms and conditions of the original right-of-way reservation, the provisions contained in Environmental Assessment OR-030-99-01 of November, 1998 and the terms and conditions of the subject amendment.

The proposed action is consistent with the MFP for the Malheur Resource Area (Lands L-4.4) and is consistent with the land use plan.

The amendment to the right-of-way reservation will not conflict with any foreseeable development plans on the subject lands if recommended stipulations are adhered to.

The United States owns the surface and mineral estates of the subject lands.

The subject lands have no known unique values, and there are no pending land use applications other than this one.

The issuance of the grant will be consistent with Section 507 of FLPMA and with the regulations found at 43 CFR 2800.

Preparer: _____ Date: _____

Finding of No Significant Impact

I have reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. I have determined that the proposed action with the mitigation measures described below will not have any significant impacts on the human environment and that an EIS in not required. I have determined that the proposed project is in conformance with the approved land use plan.

Authorized Official: s/Roy Masinton Date: 11/25/99
Malheur Resource Area Manager

Decision Record

It is my decision to implement the project as described in EA OR-030-99-01 with the mitigation measures identified below.

Mitigation measures/Remarks:

Special Stipulations Exhibit A attached.

Authorized Official: s/Roy Masinton Date: 11/25/98
Malheur Resource Area Manager